

1. An apparatus for coating an article, said apparatus comprising:  
an applicator;  
a conveyor for sequentially transporting a plurality of articles to  
said applicator; and  
5 a metering bar positioned against said applicator to meter a  
predetermined amount of coating composition to said applicator for transfer  
to an article transported to said applicator by said conveyor.

10 2. The apparatus of claim 1, wherein said applicator comprises a roller having  
a durometer of no greater than about 55 Shore A.

15 3. The apparatus of claim 1 wherein said coating apparatus is capable of  
applying a substantially uniform layer of coating composition on a plurality of articles  
having different dimensions.

4. The apparatus of claim 1 wherein the end of said metering bar positioned  
against said roller has a radius of at least about 2.5 mm.

20 5. The apparatus of claim 1 wherein the end of said metering bar positioned  
against said roller has a radius of at least about 4.0 mm.

6. The apparatus of claim 1 wherein said metering bar exerts a force of at least  
about 35 g/cm width against said applicator.

25 7. The apparatus of claim 1 wherein said metering bar exerts a force of from  
about 45 g/cm width to about 900 g/cm width against said applicator.

30 8. The apparatus of claim 1, wherein said conveyor is positioned relative to  
said applicator such that said applicator is capable of coating the edge face of a roll of tape  
disposed between the conveyor and said applicator.

9. The apparatus of claim 1, wherein said applicator comprises a roller.
10. The apparatus of claim 1, wherein said applicator comprises an endless belt.
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11. The apparatus of claim 1, further comprising a second applicator and a second metering bar positioned against said second applicator to meter a predetermined amount of coating composition to said second applicator, said second applicator being positioned to receive an article from said conveyor.
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12. The apparatus of claim 9, wherein said first applicator comprises a roller
13. The apparatus of claim 12, wherein said second applicator comprises a roller.
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14. The apparatus of claim 9, wherein said first applicator comprises an endless belt.
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15. The apparatus of claim 14, wherein said second applicator comprises an endless belt.
16. The apparatus of claim 9, wherein said apparatus is capable of substantially simultaneously
- 25
- a) transferring a coating composition from said first applicator to a first side of an article, and
- b) transferring a coating composition from said second applicator to a second side of the article opposite said first side of the article.
17. The apparatus of claim 9, wherein the article is a roll of tape and said apparatus is capable of substantially simultaneously

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- a) transferring a coating composition from said first applicator to a first edge face of a roll of tape, and
  - b) transferring a coating composition from said second applicator to a second edge face of the roll of tape opposite said first edge face of the roll of tape.

10 18. The apparatus of claim 9, wherein said first applicator and said second applicator are positioned to maintain an article between said first applicator and said second applicator.

15 19. A system for manufacturing coated articles, said system comprising a first station comprising a coating apparatus comprising an applicator, a conveyor capable of sequentially transporting a plurality of articles to said applicator, and a metering bar positioned against said applicator to meter a predetermined amount of coating composition to said applicator for transfer to an article transported to said applicator by said conveyor; and a second station for solidifying the coating composition disposed on the article.

20. The system of claim 19, wherein said applicator comprises a roller.

25 21. The system of claim 19, wherein said applicator comprises an endless belt.

22. The system of claim 19, wherein said conveyor is capable of transporting a coated article to said second station.

30 23. The system of claim 19, further comprising a second conveyor capable of transporting a coated article from said first station to said second station.

24. The system of claim 19, further comprising a second conveyor comprising a first endless belt and a second endless belt, said second conveyor being positioned to transport a coated article to said second station.

5 25. The system of claim 19, further comprising a second applicator positioned to receive an article from said conveyor, and a second metering bar positioned against said second applicator to meter a predetermined amount of coating composition to said second applicator.

10 26. The system of claim 19, further comprising a second applicator positioned opposite said first applicator, and a second metering bar positioned against said second applicator to meter a predetermined amount of coating composition to said second applicator.

15 27. The system of claim 26, wherein said first applicator comprises a roller and said second applicator comprises a roller.

20 28. The system of claim 26, wherein said first applicator comprises an endless belt.

29. The system of claim 19, further comprising a second conveyor positioned to transport a coated article to said second station.

30. The system of claim 19, further comprising a second conveyor comprising a first endless belt and a second endless belt, said second conveyor being positioned to transport a coated article to said second station.

31. The system of claim 30, wherein said second conveyor is capable of transporting a coated article between said first endless belt and said second endless belt.

32. The system of claim 19, wherein said second station comprises a source of radiation.

33. The system of claim 32, wherein said source of radiation is capable of generating radiation selected from the group consisting of ultraviolet radiation and electron beam radiation.

34. The system of claim 19, wherein said solidifying comprises curing.

10      35. The system of claim 19, wherein said solidifying comprises drying.

15      36. A method of coating an article using a coating apparatus comprising an applicator; a conveyor for transporting an article said first applicator; and a metering bar positioned against said applicator to meter a predetermined amount of coating composition to said applicator, said method comprising: applying a liquid coating composition to said applicator; and transferring said coating composition from said applicator to the article.

20      37. The method of claim 36, wherein said coating composition has a viscosity of at least about 15 cps.

25      38. The method of claim 36, wherein said coating composition has a viscosity of at least about 19 cps.

30      39. The method of claim 36, further comprising curing said coated composition.

40. The method of claim 36, further comprising drying said coated composition

41. A method of coating the edge face of a roll of tape using a coating apparatus comprising

an applicator;

5 a conveyor for transporting a roll of tape to said applicator; and

a metering bar positioned against said applicator to meter a

predetermined amount of coating composition to said applicator,

said method comprising:

applying a liquid coating composition to said applicator; and

10 transferring said coating composition from said applicator to the

edge face of the roll of tape.

42. The method of claim 41, wherein said composition has a viscosity of at least about 15 cps.

15 43. The method of claim 41, wherein said composition has a viscosity of at least about 19 cps.

44. The method of claim 41, wherein the end of said metering bar positioned 20 against said applicator has a radius of at least about 3 mm.

45. The method of claim 41, wherein the end of said metering bar positioned against said applicator has a radius of at least about 4 mm.

25 46. The method of claim 41, wherein said metering bar exerts a force of at least about 35 g/cm width against said applicator.

47. The method of claim 41, wherein said metering bar exerts a force of from about 45 g/cm width to about 900 g/cm width against said applicator.

48. The method of claim 41, wherein said conveyor is positioned relative to  
said applicator such that said applicator is capable of coating the edge face of a roll of tape  
disposed between the conveyor and the applicator.

5 49. The method of claim 41, further comprising a second applicator positioned  
to receive the article, and a second metering bar positioned against said second applicator  
to meter a predetermined amount of coating composition to said second applicator.

10 50. The method of claim 41, further comprising a second applicator positioned  
opposite said first applicator, and a second metering bar positioned against said second  
applicator to meter a predetermined amount of coating composition to said second  
applicator.

15 51. The method of claim 41, further comprising curing the composition coated  
on said edge face.

52. The method of claim 41, further comprising drying the composition coated  
on said edge face.

20 53. The method of claim 41, wherein said applicator comprises a roller.

54. The method of claim 41, wherein said applicator comprises an endless belt.

25 55. The method of claim 41, further comprising substantially simultaneously  
transferring a coating composition to a first side of an article and a second side of the  
article opposite said first side of the article.

30 56. The method of claim 41, wherein said article comprises a roll of tape, said  
method further comprising substantially simultaneously transferring a coating composition  
to a first edge face of said roll of tape and a second edge face of said roll of tape.

57. An apparatus for coating an article, said apparatus comprising:  
an applicator roller;  
a conveyor for sequentially transporting a plurality of articles to  
said roller; and  
a metering bar positioned against said roller to meter a  
predetermined amount of coating composition to said roller for transfer to  
an article transported to said applicator by said conveyor.